

# report

## I Algorithms

1. Weighted undirected graph  
Prim's maximum spanning tree algorithm
2. Weighted directed graph  
Maximum spanning tree algorithm (similar to Kruskal's algorithm)  
+ DFS (detect cycle)

## II Data structures

1. Weighted undirected graph  
Adjacent matrix
2. Weighted directed graph  
Adjacent list

## III Findings

1. Weighted undirected graph  
We can obtain correct results by greedy algorithm (maximum spanning tree).
2. Weighted directed graph  
It is a NP-hard problem. The algorithm I use is just an approximate algorithm.